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ABSTRACT

Noting that the impact of the academic environment on motivation among resilient and non-resilient high schoolers has been established, this study sought to determine if the same were true for middle school students. Six resilient and 43 non-resilient students from 4 urban, Midwestern middle schools participated. Subjects' beliefs about the academic environment and motivation were measured using the Assessment of Academic Self-Concept and Motivation (AASCM). Findings indicated that the resilient students had more positive beliefs about their academic environment than non-resilient students. The instrument utilized breaks down the academic environment into cognitive, social, extra-curricular, and personal subscales. None of the subscales proved significant in their own subsequent t-tests; only the total academic environment proved to be significant. The resilient students' motivation, assessed within the Motivational Systems Theory, was also more positive than that of the non-resilient students. (Includes table of motivational goals. Contains 20 references.) (HTH)

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The Academic Environment's Impact on Motivation in Resilient and Non-resilient Middle
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The Academic Environment's Impact on Motivation in Resilient and Non-resilient Middle Schoolers

The impact of the academic environment on motivation in resilient and non-resilient high schoolers has already been established. The cognitive and social environments had an impact (Gordon Rouse, 2001). It would follow then that the academic environment would impact motivation in resilient and non-resilient middle schoolers. This supposition is further supported by work with actual middle school students on school contexts and academic achievement (Marchant, Paulson, & Rothlisberg, 2001; Ryan & Patrick, 2001; and Wigfield & Eccles, 1994). The academic environmental beliefs and motivation of middle schoolers may be even more important as they are predictive of later beliefs and motivation in high school (Murdock, Anderman, & Hodge, 2000). Moreover, motivation has been shown to be relatively stable throughout the middle and high school years (Gottfried, Fleming, & Gottfried, 2001).

A student's beliefs about their academic environment has an impact on school achievement and motivation (Gordon Rouse, 2001; Leavitt, Leavitt, Bustos, Crooks, Hodgetts-Barber, Milevsky, Santos, & Telan, 2002; Marchant, Paulson, & Rothlisberg, 2001; and Murdock, 2002). Positive beliefs about their academic environment has also helped students to overcome adversity and display resilience (Gilligan, 2000 and Gordon Rouse, 2001). Gilligan (2000) asserts that positive school experiences have psychological and social value for students facing adversity. These experiences give the students a sense of well-being that enriches academic performance and motivation. Gordon Rouse (2001) found that students' beliefs about their academic environment in the cognitive and social spheres differentiated among the resilient and non-resilient students in high school. In the cognitive sphere, the resilient students believed more in the environment supporting their attempts at reaching cognitive goals. In the social sphere, the results differentiated between the resilient and non-resilient high schoolers in the same

fashion. These differences in academic environment beliefs and motivational patterns were related to differences in the students' academic performance.

Theoretically the facilitative value of a supportive academic environment and its importance for psychological well-being has also been established (Ryan & Deci, 2000). Ryan & Deci (2000) purport that when the need for human competence, autonomy, and relatedness are satisfied, humans in general are more self-motivated and psychologically healthy. This is true for various domains of their life, including the academic domain. From these empirical findings and theoretical suppositions, it would follow that a positive academic environment is important for both motivation and resilience. This has proven to be true in high school students (Gordon Rouse, 2001). The purpose of this study is to see if the same is true for middle school students. It is hypothesized that resilient and non-resilient students' beliefs about their academic environment will impact their motivation and that resilient students will have a more adaptive motivational pattern.

Theoretical Framework

In this study, motivation is measured by Motivational Systems Theory, (MST)(Ford, 1992, 1995). MST defines motivation as a patterning of beliefs about ability and beliefs about environmental support. In addition, the value that is placed on a goal is seen as relevant as the goal content. This novel theory is well-suited for this study for several reasons. First, this theory is integrative and comprehensive. MST (Ford, 1992, 1995) combines the strengths of contemporary motivational theories such as achievement goal theory (Pintrich, 2000), self-efficacy theory (Zimmerman, 2000), and expectancy-value theory (Wigfield & Eccles, 2000). In terms of achievement goal theory (Pintrich, 2000) a person can pursue basically two types of goals. In MST a person can pursue 24 goals with either of ten motivational patterns (See Figures 1 & 2 and Table 1). Self-efficacy theory (Zimmerman, 2000) posits that what a person believes about their ability to perform specific acts is important for their motivation. MST (Ford, 1992, 1995) has a similar concept of personal agency (self-concept), which is beliefs about ability and

beliefs about environmental support. Expectancy value theory defines motivation as ability beliefs, expectancies for success, and subjective task values (Wigfield & Eccles, 2000). MST has as an integral aspect of its conceptualization of motivation, ability beliefs and subjective task values. MST's inclusion of these concepts along with 24 goals and personal agency makes it more comprehensive and integrative than the other theories. These other contemporary theories are powerful in their own right; however, MST integrates their strengths and produces a novel theoretical heuristic for examining motivation.

Motivational Systems Theory (MST) is also suited for this study because of its inclusion of beliefs about environmental support in the definition and patterning of motivation. The fact that motivation can be influenced by the environment is an important and relatively new focus in motivational research (Maehr & Yamaguchi, 2001). Moreover, it is students' beliefs about their environmental support that is important when considering influences on feelings, attitudes, and behavior (Anderman, Maehr, & Midgley, 1999). MST's definition of motivation, namely beliefs about ability and beliefs about environmental support, is truly novel and timely and appropriate for an examination of the environment's impact on motivation in resilient and non-resilient middle schoolers.

Method

The participants in this study came from four urban middle schools in a Midwestern school district. Six of these students were resilient and 43 of them were non-resilient. Usually, a third of the at-risk students are resilient (Werner & Smith, 1982 and Gordon Rouse, 2001), but this sample was known to be of significant risk by the school district's indices of success. Four of the resilient students were female and 2 were male. Four of the resilient students were African American, one was European American, and another was Asian. The resilient students came from a low socio-economic, high -stress background but received a grade point average of 2.5 or above on a four point scale. The non-resilient students came from the same socio-economic and stress background, but did not have the requisite grade point average. Socio-economic

background was measured by free-lunch status and stress was measured by the Life Events Checklist (Johnson & McCutcheon, 1980). The participants' beliefs about the academic environment and motivation was measured by the Assessment of Academic Self-Concept and Motivation (AASCM) (Gordon Rouse & Cashin, 2000).

The AASCM (Gordon Rouse & Cashin, 2000) is based on Motivational Systems Theory (Ford, 1992, 1995). As stated previously, this theory espouses the belief that motivation is a combination of goals, emotions, and personal agency beliefs (self-concept). Personal agency beliefs are beliefs about one's ability to reach a goal and beliefs about one's environmental responsiveness to achieve that same goal. The integrative nature of this theory allows one to assess how the person and environment interact to create motivation. The AASCM has four academic environmental subscales that combine to make a total academic environmental subscale. The four subscales are cognitive, social, extra-curricular, and personal. The cognitive subscales measure how well students can learn and understand the material presented to them in class. The social subscale measures the students' goals of making friends and extra-curricular subscale measures goals surrounding sports and other extra-curricular activities. Finding someone to trust and give you important information constitutes the goals of the personal subscale.

Results

The resilient students had more positive beliefs about their academic environment ($p=.019$) (See Table 2). T-test results show that resilient students had stronger beliefs that their academic environment supported their academic goal pursuits. The instrument utilized breaks down the academic environment into cognitive, social, extra-curricular, and personal sub-scales. None of the subscales proved significant on their own in subsequent t-Tests. Only the total academic environment scale proved to be significant. Other post-hoc tests showed no significant

differences by gender among the resilient students. This could be because there were so few resilient students in the sample.

The resilient students' motivation, assessed within the Motivational Systems Theory (Ford, 1992, 1995) framework, was also more positive. In this framework motivation is measured by beliefs about environmental support and beliefs about ability. Just like with their academic environment, the resilient students had more positive beliefs about their academic ability ($p=.027$) (See Table 3). Therefore, the resilient students had a robust motivational pattern, while the non-resilient students had a vulnerable motivational pattern. A robust pattern is strong in purpose or outlook. A vulnerable pattern is adequate functioning that may evidence risk under conditions of stress (Ford, 1992, 1995).

Discussion

Students' beliefs about their academic environment are important for motivation and achievement. This is true for middle school students as well as high school students. According to Motivational Systems Theory (Ford, 1992, 1994), a students' motivational pattern is partially determined by their beliefs about the environment. Beliefs about the environment constitute an integral part of a student's personal agency beliefs and motivational pattern. This is very important for middle schoolers because their academic environment does not always fit well with their developmental needs (Wigfield & Eccles, 1994). Since the non-resilient students do not believe much in their ability concerning academic pursuits, an environment supportive of their academic pursuits is paramount. If the non-resilient students believed that the environment was supportive, then the non-resilient students would have a modest motivational pattern. This motivational pattern is more adaptive than the vulnerable motivational pattern that the non-resilient students display. A modest motivational pattern means that a modest estimate is placed on one's abilities (Ford, 1992, 1995), but the environment is seen as supportive of one's goals. This type of pattern could perhaps lead to academic achievement for some non-resilient students. Especially since the non-resilient students have considerable stress in their lives.

Another finding that is interesting to note, is that none of the academic environment subscales were significant on their own, but the total environment scale delivered significant results. This finding seems to suggest that the academic environment is seen more holistically by middle schoolers than by high schoolers. Maybe negative experiences in any of the subdomains of a middle schooler's environment (cognitive, social, extra-curricular, or personal) influences their beliefs about other subdomains and the total environment. More research in this area is needed. Interviews of the resilient and non-resilient students could be illustrative. It would also be illustrative to see how these students' beliefs about the environment links to mental health.

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CAPABILITY BELIEFS

ENVIRONMENTAL BELIEFS	CAPABILITY BELIEFS			
		Strong	Moderate or Variable	Weak
	Positive	R Robust Pattern	M Modest Pattern	F Fragile Pattern
	Neutral or Variable	T Tenacious Pattern	V Vulnerable Pattern	S Self-Doubting Pattern
	Negative	A1 or A2 Accepting <u>or</u> Antagonistic Pattern	D Discouraged Pattern	H Hopeless Pattern

Figure 1. Motivational Patterns

<u>Pattern</u>	<u>Definition</u>
R	Robust- "strong and firm in purpose or outlook"
M	Modest- "placing a moderate estimate on one's abilities"
F	Fragile- "intact but easily broken or damaged"
T	Tenacious- "suggests strength in dealing with challenges and obstacles"
V	Vulnerable- "functioning adequately but may be at risk under conditions of stress"
S	Self-doubting- "having a lack of faith in one's chances of success"
Al	Accepting- "to endure difficulties quietly and with courage"
Al	Antagonistic- "tending toward actively expressed annoyance or hostility"
D	Discouraged- "being deprived of but potentially maintaining some confidence or hope"
H	Hopeless- "having no expectation of success"

Figure 2. Definition of Motivational Patterns

Table 1.

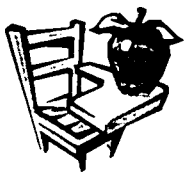
Desired Within – Person Consequences

Affective Goals



Entertainment	Experiencing excitement or heightened arousal; Avoiding boredom or stressful inactivity
Tranquility	Feeling relaxed and at ease; Avoiding stressful overarousal
Happiness	Experiencing feelings of joy, satisfaction, or well being; Avoiding feelings of emotional distress or dissatisfaction
Bodily Sensations	Experiencing pleasure associated with physical sensations, physical movement, or bodily contact; Avoiding unpleasant or uncomfortable bodily sensations
Physical Well-Being	Feeling healthy, energetic, or physically robust; Avoiding feelings of lethargy, weakness, or ill health

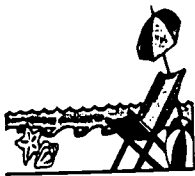
Cognitive Goals



Exploration	Satisfying one's curiosity about personally meaningful events; Avoiding a sense of being uninformed or not knowing what's going on
Understanding	Gaining knowledge or making sense out of something; Avoiding misconceptions, erroneous beliefs, or feelings of confusion

Intellectual Creativity	Engaging in activities involving original thinking or novel or interesting ideas; Avoiding mindless or familiar ways of thinking
Positive Self-Evaluation	Maintaining a sense of self-confidence, pride, or self-worth; Avoiding feelings of failure, guilt, or incompetence

Subjective Organization Goals



Unity	Experiencing a profound or spiritual sense of connectedness, harmony, or oneness with people, nature, or a greater power; Avoiding feelings of psychological disunity or disorganization
Transcendence	Experiencing optimal or extraordinary states of functioning; Avoiding feeling trapped within the boundaries of ordinary experience

Desired Person-Environment Consequences

Self-Assertive Social Relationship Goals



Individuality	Feeling unique, special, or different; Avoiding similarity or conformity with others
Self-Determination	Experiencing a sense of freedom to act or make choices; Avoiding the feeling of being pressured, constrained, or coerced

Superiority	Comparing favorably to others in terms of winning, status, or success; Avoiding unfavorable comparisons with others
Resource Acquisition	Obtaining approval, support, assistance, advice, or validation from others; Avoiding social disapproval or rejection

Integrative Social Relationship Goals



Belongingness	Building or maintaining attachments, friendships, intimacy, or a sense of community; Avoiding feelings of social isolation or separateness
Social Responsibility	Keeping interpersonal commitments, meeting social role obligations, and conforming to social and moral rules; Avoiding social transgressions and unethical or illegal conduct
Equity	Promoting fairness, justice, reciprocity, or equality; Avoiding unfair or unjust actions
Resource Provision	Giving approval, support, assistance, advice, or validation to others; Avoiding selfish or uncaring behavior

Task Goals



Mastery	Meeting a challenging standard of achievement or improvement; Avoiding incompetence, mediocrity, or decrements in performance
Task Creativity	Engaging in activities involving artistic expression or creativity; Avoiding tasks that do not provide opportunities for creative action

Management	Maintaining order, organization, or productivity in daily life tasks; Avoiding sloppiness, inefficiency, or disorganization
Material Gain	Increasing the amount of money or tangible goods one has; Avoiding the loss of money or material possessions
Safety	Being unharmed, physically secure, and free from risk; Avoiding threatening, depriving, or harmful circumstances

Table 2

Students' beliefs about total environmental support

Group	Mean*	DF	Sig.
Resilient	2.42	1	.019
Non-resilient	3.44	1	.019

* Lower means equal higher levels of beliefs

Table 3

Students' beliefs about their total ability

Group	Mean*	DF	Sig.
Resilient	2.38	1	.027
Non-resilient	3.28	1	.027

* Lower means equal higher levels of beliefs



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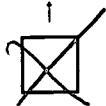
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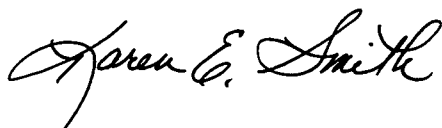
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